

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Xie et al.

Application No.: 10/786,787

Examiner: Hanley, John C.

Filed: February 24, 2004

Group Art Unit: 2856

For: INTEGRATED MONOLITHIC TRI-AXIAL MICROMACHINED ACCELEROMETER



INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to the Duty to Disclose under 37 C.F.R. §1.56, Applicants hereby disclose information that may be relevant to the Examiner's consideration of the above-identified application and the patentability of its claims.

The Supplemental IDS is being submitted after the first office action was mailed but before a final office action. An authorization to charge the \$180.00 fee required by 37 C.F.R. 1.97(c)(2) to Deposit Account No. 50-0951 is provided herewith. No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 50-0951.

Respectfully submitted,

Date:

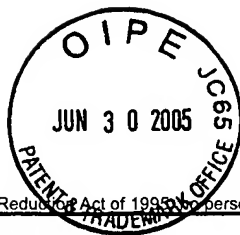
6/28/05

07/01/2005 HTECKLU1 00000008 500951 10786787

01 FC:1806 180.00 DA

Docket No.: 5853-345

Neil R. Jetter, Reg. No. 46,803  
Akerman Senterfitt  
222 Lakeview Avenue, Suite 400  
Post Office Box 3188  
West Palm Beach, FL 33402-3188  
Phone: 561.653.5000  
Fax: 561.659.6313



PTO/SB/08A (04-03)

Approved for use through 04/30/2003. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

1

of

3

**Complete if Known**

Application Number	10/786,787
Filing Date	February 24, 2004
First Named Inventor	Xie et al.
Art Unit	2856
Examiner Name	Hanley, John C.
Attorney Docket Number	5853-345

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 5,501,893	03/26/1996	Laermer et al.	
		US- 5,717,631	02/10/1998	Carley et al.	
		US- 5,719,073	02/17/1998	Shaw et al.	
		US- 5,970,315	10/19/1999	Carley et al.	
		US- 6,088,907	07/18/2000	Lee et al.	
		US- 6,214,633	04/10/2001	Clark et al.	
		US- 6,681,063	01/20/2004	Kane et al.	
		US- 6,737,648	05/18/2004	Fedder et al.	
		US- 2004/0166688	08/26/2004	Xie et al.	
		US- 2004/0195096	10/07/2004	Tsamis et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
		WO 02/43148 A2	05/30/2002			

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		<b>Application Number</b>	10/786,787
		<b>Filing Date</b>	February 24, 2004
		<b>First Named Inventor</b>	Xie et al.
		<b>Art Unit</b>	2856
		<b>Examiner Name</b>	Hanley, John C.
		<b>Attorney Docket Number</b>	5853-345
<b>Sheet</b>	2	<b>of</b>	3

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Xie, Huikai, "Gyroscope and Micromirror Design Using Vertical-Axis CMOS-MEMS Actuation and Sensing," PhD. Thesis, Carnegie Mellon University, 2002.	
		Xie et al., "A DRIE CMOS-MEMS Gyroscope," IEEE Sensors 2002 Conf., June 12-14, 2002.	
		Xie et al., "Endoscopic optical coherence tomographic imaging with a CMOS-MEMS micromirror," Sensor and Actuators A 103, 2003, pp. 237-241.	
		Xie et al., "A CMOS Z-Axis Capacitive Accelerometer with Comb-Finger Sensing", in The 13th Annual International Micro Electro Mechanical Systems Conference - continued below	
		Continued from above - (MEMS '00, Miyazaki, Japan, Jan. 23-27, 2000, pp. 496-501.	
		Xie et al., "A CMOS-MEMS Lateral-axis Gyroscope", Technical Digest. The 14th IEEE International Conference on Micro Electro Mechanical Systems - MEMS 2001, - continued below	
		Continued from above - Interlaken, Switzerland, Jan. 21-25, 2001, p. 162-165.	
		Xie et al., "Vertical Comb-finger Capacitive Actuation and Sensing for CMOS-MEMS", Sensors & Actuators: A, Vol. 95 (2002), pp. 212-221.	
		Xie et al., "Design and fabrication of an integrated CMOS-MEMS 3-axis accelerometer", The 2003 Nanotechnology Conference and Trade Show, San Francisco, CA, - continued below	
		Continued from above - Feb. 23-27, 2003, p. 292-295.	

<b>Examiner Signature</b>	<b>Date Considered</b>
-------------------------------	----------------------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>		<b>Complete if Known</b>	
		Application Number	10/786,787
		Filing Date	February 24, 2004
		First Named Inventor	Xie et al.
		Art Unit	2856
		Examiner Name	Hanley, John C.
Sheet 3	of 3	Attorney Docket Number	5853-345

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Qu et al., "A Single-crystal Silicon 3-axis CMOS-MEMS Accelerometer," IEEE Sensors 2004, Vienna, Austria, Oct. 24-27, 2004.	
		Lemkin et al., "A 3-axis surface Micromachined Sigma Delta accelerometer", Technical Digest of 1997 IEEE International Solid-State Circuits Conference. - continued below	
		Continued from above - (ISSCC '97); San Francisco, CA, USA, 6-8 Feb. 1997 p. 202-3.	
		Chae et al., "A Monolithic 3-Axis Silicon Capacitive Accelerometer with Micro-g Resolution," The Proceedings of the 12th International Conference Solid-State - continued below	
		Continued from above - Sensors, Actuators and Microsystems (TRANSDUCERS '03), Boston, MA, June 2003.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.